5-22-1979

Test 1312: International 484 Utility Diesel 8-Speed

Tractor Museum
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NEBRASKA TRACTOR TEST 1312 — INTERNATIONAL 484 UTILITY DIESEL 8 SPEED

POWER TAKE-OFF PERFORMANCE

Power Hp (kW)	Crank shaft speed rpm	Fuel Consumption gal/hr (l/h)	lb/hp.hr (kg/kW.h)	Hp.hr/gal (kW.h/l)	Temperature °F (°C) Cooling medium	Air wet bulb	Air dry bulb	Barometer inch Hg (kPa)
MAXIMUM POWER AND FUEL CONSUMPTION								
Rated Engine Speed—Two Hours (PTO Speed—555 rpm)								
42.42 (31.63)	2200	2.868 (10.856)	0.473 (0.288)	14.79 (2.914)	184 (84.3)	58 (14.5)	75 (23.8)	29.093 (98.244)
Standard Power Take-off Speed (540 rpm)—One Hour								
41.79 (31.16)	2141	2.822 (10.682)	0.472 (0.287)	14.81 (2.917)	184 (84.3)	59 (14.8)	75 (23.7)	29.095 (98.249)
VARYING POWER AND FUEL CONSUMPTION—Two Hours								
37.31 (27.82)	2276	2.590 (9.806)	0.486 (0.295)	14.40 (2.837)	183 (83.9)	59 (15.0)	75 (23.9)	....
0.00 (0.00)	2415	0.922 (3.490)	....	....	181 (82.5)	58 (14.4)	74 (23.3)	....
19.27 (14.37)	2351	1.737 (6.575)	0.630 (0.383)	11.10 (2.186)	181 (82.8)	59 (15.0)	75 (23.9)	....
42.61 (31.77)	2200	2.869 (10.861)	0.471 (0.287)	14.85 (2.925)	185 (85.0)	58 (14.7)	74 (23.6)	....
9.72 (7.25)	2384	1.334 (5.049)	0.959 (0.584)	7.29 (1.436)	181 (82.8)	59 (15.0)	75 (23.9)	....
28.37 (21.16)	2311	2.136 (8.085)	0.527 (0.320)	13.28 (2.617)	182 (83.3)	59 (15.0)	75 (23.9)	....
Av 22.88	**2323**	**1.931**	**0.590**	**11.85**	**182**	**59**	**75**	**29.093**
Av (17.06)		***(7.311)***	***(0.359)***	***(2.334)***	***(83.4)***	***(14.9)***	***(23.8)***	***(98.244)***

DRAWBAR PERFORMANCE

Power Hp (kW)	Drawbar pull lbs (kN)	Speed mph (km/h)	Crank-shaft speed rpm	Slip %	Fuel Consumption gal/hr (l/h)	lb/hp.hr (kg/kW.h)	Hp.hr/gal (kW.h/l)	Temp. °F (°C) Cool-ing med	Air wet bulb	Air dry bulb	Barom. inch Hg (kPa)
Maximum Available Power—Two Hours 5th (1H) Gear											
36.00 (26.84)	2831 (12.59)	4.77 (7.67)	2198	5.75	2.823 (10.688)	0.549 (0.334)	12.75 (2.512)	188 (86.6)	61 (15.8)	82 (27.8)	28.625 (96.662)
75% of Pull at Maximum Power—Ten Hours 5th (1H) Gear											
29.97 (22.35)	2238 (9.96)	5.02 (8.08)	2282	4.36	2.420 (9.159)	0.565 (0.344)	12.39 (2.440)	186 (85.7)	67 (19.4)	84 (28.8)	28.688 (96.875)
50% of Pull at Maximum Power—Two Hours 5th (1H) Gear											
20.89 (15.58)	1507 (6.70)	5.20 (8.37)	2327	2.90	1.966 (7.441)	0.658 (0.400)	10.63 (2.093)	183 (83.9)	66 (18.9)	69 (20.6)	28.685 (96.865)
50% of Pull at Reduced Engine Speed—Two Hours 6th (2H) Gear											
20.70 (15.44)	1494 (6.65)	5.20 (8.36)	1694	2.87	1.716 (6.494)	0.580 (0.353)	12.07 (2.378)	186 (85.3)	70 (20.8)	76 (24.4)	28.690 (96.882)
MAXIMUM POWER IN SELECTED GEARS											
23.93 (17.84)	5500 (24.46)	1.63 (2.63)	2310	14.38	2nd (2L) Gear			185 (84.7)	62 (16.7)	84 (28.9)	28.650 (96.747)
36.20 (26.99)	4236 (18.84)	3.20 (5.16)	2198	8.81	3rd (3L) Gear			188 (86.7)	62 (16.7)	82 (27.8)	28.670 (96.814)
36.66 (27.34)	3239 (14.41)	4.24 (6.83)	2200	6.29	4th (4L) Gear			188 (86.4)	62 (16.7)	82 (27.8)	28.680 (96.848)
38.06 (28.38)	2988 (13.29)	4.78 (7.69)	2205	5.84	5th (1H) Gear			187 (86.1)	62 (16.7)	83 (28.3)	28.700 (96.916)
36.83 (27.47)	2068 (9.20)	6.68 (10.75)	2199	3.92	6th (2H) Gear			188 (86.4)	62 (16.7)	83 (28.3)	28.660 (96.781)

LUGGING ABILITY IN 5th (1H) GEAR

Crankshaft Speed rpm	2205	1980	1757	1536	1333	1110
Pull—lbs (kN)	2988 (13.29)	3116 (13.86)	3302 (14.69)	3364 (14.96)	3364 (14.96)	3135 (13.94)
Increase in Pull %	0	4	11	13	13	5
Power—Hp (kW)	38.06 (28.38)	35.56 (26.52)	33.31 (24.84)	29.58 (22.06)	25.69 (19.16)	20.02 (14.93)
Speed—Mph (km/h)	4.78 (7.69)	4.28 (6.89)	3.78 (6.09)	3.30 (5.31)	2.86 (4.61)	2.39 (3.85)
Slip %	5.84	6.01	6.35	6.68	6.46	6.23

Department of Agricultural Engineering

Dates of Test: May 22-31, 1979

Manufacturer: INTERNATIONAL HARVESTER CO., 401 North Michigan Ave., Chicago, Ill. 60611

FUEL, OIL AND TIME: Fuel No. 2 Diesel **Cetane No.** 49.0 (rating taken from oil company's typical inspection data) **Specific gravity converted to 60°/60° *(15°/15°)*** 0.8401 **Fuel weight** 6.995 lbs/gal *(0.838 kg/l)* **Oil SAE** 30 **API service classification** SC-SE/CA-CD **To motor** 1.600 gal *(6.056 l)* **Drained from motor** 1.568 gal *(5.935 l)* **Transmission and final drive lubricant** I. H. Hytran fluid **Total time engine was operated** 36.5 hours

ENGINE: Make International Diesel **Type** 3 cylinder vertical **Serial No.** 179DT2D372290* **Crankshaft** lengthwise **Rated rpm** 2200 **Bore and stroke** 3.875″ × 5.06″ *(98.4 mm × 128.5 mm)* **Compression ratio** 15.0 to 1 **Displacement** 179 cu in *(2933 ml)* **Cranking system** 12 volt **Lubrication** pressure **Air cleaner** two paper elements **Oil filter** one paper cartridge **Oil cooler** radiator for hydraulic and transmission oil **Fuel filter** two paper elements **Muffler** vertical **Cooling medium temperature control** one thermostat

CHASSIS: Type standard **Serial No.** B480003B000956-X- **Tread width** rear 52″ *(1321 mm)* to 76″ *(1930 mm)* front 52″ *(1320 mm)* to 72″ *(1829 mm)* **Wheel base** 72.8″ *(1849 mm)* **Center of gravity** (without operator or ballast, with minimum tread, with fuel tank filled and tractor serviced for operation) Horizontal distance forward from center-line of rear wheels 26.9″ *(683 mm)* Vertical distance above roadway 29.7″ *(754 mm)* Horizontal distance from center of rear wheel tread 0″ *(0 mm)* to the right/left **Hydraulic control system** direct engine drive **Transmission** selective gear fixed ratio **Advertised speeds mph *(km/h)*** first 1.3 *(2.1)* second 1.8 *(3.0)* third 3.6 *(5.6)* fourth 4.6 *(7.4)* fifth 5.1 *(8.3)* sixth 7.0 *(11.3)* seventh 13.7 *(22.0)* eighth 17.6 *(28.4)* reverse 1.6 *(2.6)*, 2.2 *(3.6)*, 4.3 *(6.9)*, 5.5 *(8.9)* **Clutch** single dry disc operated by foot pedal **Brakes** single wet disc hydraulically operated by two foot pedals which can be locked together **Steering** hydrostatic **Turning radius** (on concrete surface with brake applied) right 108″ *(2.74 m)* left 108″ *(2.74 m)* (on concrete surface without brake) right 120″ *(3.04 m)* left 120″ *(3.04 m)* **Turning space diameter** (on concrete surface with brake applied) right 226″ *(5.74 m)* left 226″ *(5.74 m)* (on concrete surface without brake) right 250″ *(6.35 m)* left 250″ *(6.35 m)* **Power take-off** 540 rpm at 2141 engine rpm.

REPAIRS and ADJUSTMENTS: No repairs or adjustments.

REMARKS: All test results were determined from observed data obtained in accordance with SAE and ASAE test code or official Nebraska test

TRACTOR SOUND LEVEL WITHOUT CAB	dB(A)
Maximum Available Power—Two Hours	96.5
75% of Pull at Maximum Power—Ten Hours	96.0
50% of Pull at Maximum Power—Two Hours	97.0
50% of Pull at Reduced Engine Speed—Two Hours	94.0
Bystander in 8th (4H) gear	84.0

TIRES, BALLAST AND WEIGHT		With Ballast	Without Ballast
Rear Tires	—No., size, ply & psi *(kPa)*	Two 14.9-28; 6; 16 *(110)*	Two 14.9-28; 6; 16 *(110)*
Ballast	—Liquid (each)	700 lb *(318 kg)*	None
	—Cast Iron (each)	578 lb *(262 kg)*	None
Front Tires	—No., size, ply & psi *(kPa)*	Two 9.5L-15; 6; 36 *(250)*	Two 9.5L-15; 6; 36 *(250)*
Ballast	—Liquid (each)	None	None
	—Cast Iron (each)	77 lb *(35 kg)*	None
Height of Drawbar		12.5 in *(320 mm)*	12.5 in *(320 mm)*
Static Weight with Operator—	Rear	5710 lb *(2590 kg)*	3155 lb *(1431 kg)*
	Front	2000 lb *(907 kg)*	1845 lb *(837 kg)*
	Total	7710 lb *(3497 kg)*	5000 lb *(2268 kg)*

procedure. Temperature at injection pump return was 145°F *(62.8°C)*. Five gears were chosen between tire tangential pull limit and 10 mph *(16.1 km/h)*.

We, the undersigned, certify that this is a true and correct report of official Tractor Test **1312.**

LOUIS I. LEVITICUS
Engineer-in-Charge

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International 484 Utility Diesel

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